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व्हाइट) — विशिष्टि

(पहला पुनरीक्षण)

Forceps, Tonsil Holding
(Muck's and White's Patterns) —
Specification

(First Revision)

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भारतीय मानक ब्यूरो

BUREAU OF INDIAN STANDARDS

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FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Ear, Nose and Throat Surgery Instruments Sectional Committee had been approved by the Medical Equipment and Hospital Planning Division Council.

This standard was first published in 1968. The revision of this standard has been taken up to update it with development taken place in the field. All the amendments issued so far have been incorporated in this revision.

This standard is one of a series of Indian Standards on tonsil forceps. This standard has been prepared based on indigenous manufacturers' data/practices prevalent in the field in India.

This standard requires reference to IS 3642 (Part 1) : 1990, 'Surgical instruments — Specification: Part 1 Non-cutting articulated instruments (*second revision*)' whose provisions, subject to the limitations specified herein, are applicable.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

FORCEPS, TONSIL HOLDING (MUCK'S AND WHITE'S PATTERNS) — SPECIFICATION

(*First Revision*)

1 SCOPE

1.1 This standard lays down the requirements for tonsil holding forceps (Muck's and White's patterns).

2 REFERENCES

The standards given below contain provisions which, through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of these standards.

<i>IS No.</i>	<i>Title</i>
1501 (Part 1) : 2013	Metallic materials — Vickers hardness test: Part 1 Test method (<i>fourth revision</i>)
1570 (Part 5) : 1985	Schedules for wrought steels: Part 5 Stainless and heat-resisting steels (<i>second revision</i>)
3642 (Part 1) : 1990	Surgical instruments — Specification: Part 1 Non-cutting, articulated instruments (<i>second revision</i>)
7531 : 1990	Surgical instruments — Corrosion resistance of stainless steel surgical instruments — Methods of tests (<i>first revision</i>)

3 MATERIAL

3.1 The forceps shall be made of stainless steel conforming to designation 30Cr13 of IS 1570 (Part 5).

3.2 The rivets shall be of stainless steel either same as used for the forceps at **3.1**.

4 SHAPE AND DIMENSIONS

4.1 The shape and dimensions of the forceps shall be as given in Fig. 1 and Fig. 2.

4.2 Tolerances on dimensions where not specified shall conform to IS 3642 (Part 1).

4.3 Joints

The joint shall conform to **13.2.1** of Section 3 of IS 3642 (Part 1).

4.4 Ratchet Teeth

The ratchet teeth shall conform to Section 4 of IS 3642 (Part 1) and with combination as given in **4.4.1** and **4.4.2**.

4.4.1 The ratchet teeth for Muck's pattern shall be of combination 1 in 2.

4.4.2 The ratchet teeth for White's pattern may be of combination 1 in 1 also.

4.5 Finger Loops

Finger loops shall conform to size 3 of Section 6 of IS 3642 (Part 1) for both patterns. White's pattern forceps may also have on the thumb side, open-loop as shown in Fig. 2.

4.6 The holding jaws of White's forceps shall have teeth 4×5 as shown in Fig. 2.

5 WORKMANSHIP AND FINISH

5.1 The forceps shall be finished smooth and shall be free from burrs, pits, cracks and other surface defects.

5.2 The movements of the arms of the forceps shall be symmetrical on their axes, even and smooth, without any play or jerky motion.

5.3 They shall be well-balanced.

5.4 All edges except the teeth shall be smooth and even.

5.5 The teeth for holding of the White's forceps shall not be sharp and shall not stick when opened from the locked position.

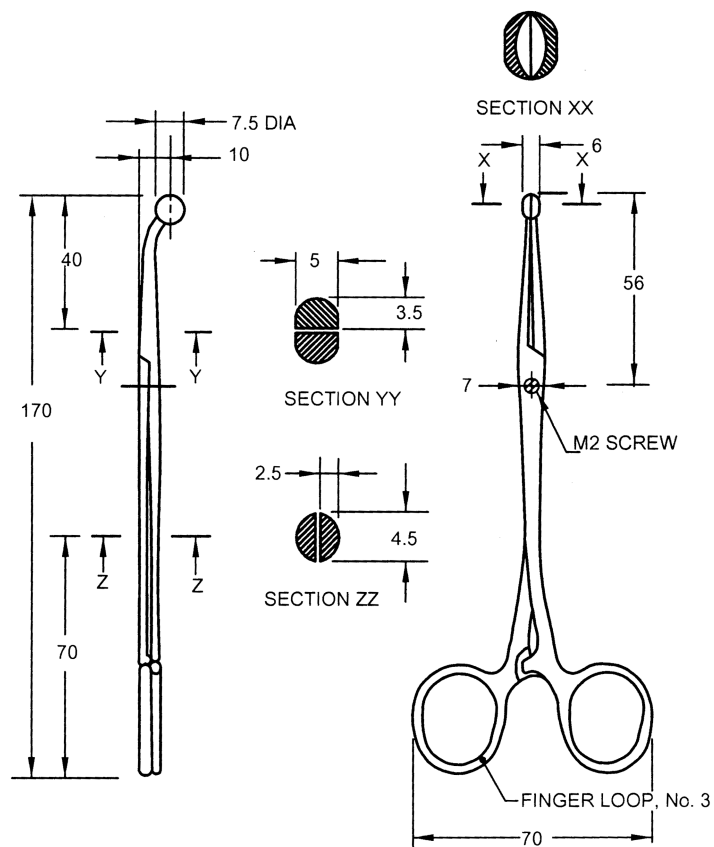
5.5.1 The teeth for holding shall not protrude beyond a plane tangential to the jaws of the forceps in the locked position.

5.5.2 The cup-shaped jaws of the Muck's pattern shall register accurately and shall close completely without any gap when the forceps is clamped on its first ratchet.

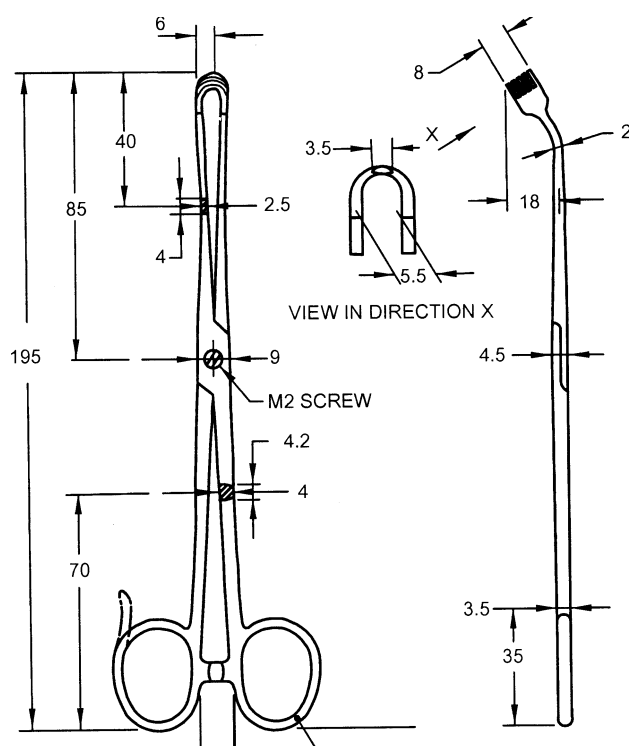
5.6 The forceps shall be passivated and polished bright.

6 HEAT-TREATMENT

6.1 The forceps, except the rivet, shall be evenly hardened and tempered to give a uniform hardness of 430 to 490 HV of the finished instrument when tested in accordance with IS 1501 (Part 1).



All dimensions in millimetres.
FIG. 1 TONSIL HOLDING FORCEPS, MUCK'S PATTERN



All dimensions in millimetres.
FIG. 2 TONSIL HOLDING FORCEPS, WHITE'S PATTERN

7 TESTS

7.1 Load Closure

7.1.1 The ratchet teeth of White's tonsil holding forceps shall engage when a load of 11 kgf is applied on the finger loops.

7.1.2 The ratchet teeth of Muck's tonsil holding forceps shall engage as follows:

<i>Load for Engagement kgf</i>	<i>Engagement of Teeth</i>
7	First tooth
11	Second tooth

7.2 Flexibility

The flexibility of the shanks of the forceps shall be tested as given in **7.2.1**.

7.2.1 One arm of the forceps shall be fixed in a vice at a point under the joint so that the arm protrudes from the upper surface of the jaws of the vice by the amounts shown below:

<i>Type</i>	<i>Size mm</i>	<i>Distance of Pole of Finger Loop or Point of Application of Load from the Vice Jaws mm</i>	<i>Deflection mm</i>
White's pattern	195	100	10
Muck's pattern	170	100	12

7.2.2 By the application of a gradual force at the upper pole of the finger loop, the shank of the forceps shall be deflected in a plane at right angles to that of the finger loop by the amount shown as measured at the upper extremity of the clamped arm (that is, at the upper pole of the finger loop). On release of the force, no permanent set shall be observed. The test shall be repeated on the same arm with the finger loop fixed at its equator in the vice and the shank projecting above the vice.

7.3 Corrosion Resistance

The instrument shall satisfy the boiling and autoclaving test as specified in IS 7531.

8 MARKING

8.1 The forceps shall be clearly and indelibly marked with the manufacturer's name, initials or trade-mark in addition to the letters 'SS'.

8.2 BIS Certification Marking

The forceps may also be marked with the Standard Mark.

8.2.1 The use of the Standard Mark is governed by the provisions of *Bureau of Indian Standards Act, 2016* and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

9 PACKING

9.1 The forceps shall be wrapped individually in moisture-proof paper or polyethylene bag and packed in a manner that coming into contact with one another is avoided.

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Amendments Issued Since Publication

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